



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/671,330 | 09/25/2003 | Chris D. Shelton | DYOUP0256US | 5689 |

23908 7590 05/20/2005

RENNER OTTO BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

EXAMINER

OLSON, LARS A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3617

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,330

Applicant(s)

SHELTON, CHRIS D.

Examiner

Lars A Olson

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 and 10-29 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

RD

DETAILED ACTION

1. A notice of withdrawal from issue was mailed on April 25, 2005.
2. Claim 1 has been canceled.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson et al. (US 5,995,882) in view of Joao (US 5,917,405), and further in view of Watt et al. (US 6,390,012).

Patterson et al. discloses a remote operated vehicle (ROV) system, as shown in Figures 1-9, that is comprised of a topside in the form of a ship, as described in lines 29-45 of column 1, and a fish or ROV, defined as Part #30, with a GPS or position data receiver, defined as Part #54, that is mounted on an upwardly protruding portion or antenna tower, defined as Part #51, an onboard power supply, defined as Part #53, in the form of a battery, a movement control device, defined as Part #73, that is operable to process position data and control movement of said ROV, as shown in Figure 5, and an optional umbilical cable, as described in lines 6-15 of column 4, for interconnecting

said ROV and said topside in order to provide a communication path between said ROV and said topside.

Joao discloses a control apparatus for vehicles, as shown in Figures 1-16, said apparatus being suitable for use with submersibles and marine vessels, as described in lines 24-40 of column 18, said apparatus being comprised of a remote system at an external location that includes a vehicle position and locating system receiver, defined as Part #14, with a position data transmitter, defined as Part #36, and a position data receiver, defined as Part #30, as shown in Figure 2, that is capable of receiving GPS information, in combination with a remote vehicle with a vehicle position and locating system, defined as Part #13, having a GPS or position data receiver, defined as Part #23, a position data transmitter, defined as Part #24, as shown in Figure 3, and a second position data receiver, defined as Part #3, that is capable of receiving GPS information from a second position data transmitter, defined as Part #2, that is disposed on said remote system, as shown in Figure 1.

Patterson et al. in combination with the teachings of Joao shows the use of all of the features claimed except for the use of an umbilical cable with a connector that is operable to detachably connect it to said fish, said connector being remotely operable by a detach command from said topside to cause said cable to detach from said fish.

Watt et al. discloses an apparatus for operating an autonomous underwater vehicle (AUV), as shown in Figures 1A-5, that includes a connector, defined as Part #25, that connects a data/power umbilical cable, defined as Part #45, from a topside or ship, defined as Part #50, to a fish or AUV, defined as Part #60. Said

connector is operable by remote control from said topside to detach said umbilical cable from said fish in order to deploy said fish, as described in lines 48-53 of column 5.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize an umbilical cable with remotely controllable connector between a fish and a topside, as taught by Watt et al., in combination with the ROV system as disclosed by Patterson et al. and the teachings of Joao for the purpose of providing an umbilical cable connection system between a fish and a topside that allows for optional connection of said umbilical cable.

Allowable Subject Matter

5. Claims 2-7 and 10-29 are allowed.
6. Claims 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mori (US 6,751,535) discloses a travel controlling apparatus for an unmanned vehicle utilizing a GPS receiver. Dance et al. (US 6,230,097) discloses a system for accurate vehicle navigation and tracking within a waterway utilizing GPS information.

Art Unit: 3617

8. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

May 17, 2005

LARS A. OLSON
PRIMARY EXAMINER

A handwritten signature in cursive script that reads "Lars Olson".

5/17/05